Claims:

1. A method of operating a wireless transmitter to wirelessly transmit a data packet on a variable rate channel to a receiver, the method comprising:

transmitting a first transmission block portion and a second transmission block portion to the receiver in a first transmission at a first data transmission rate; and

when the receiver does not successfully decode the first transmission in a first decoding, transmitting a second transmission to the receiver at a second data transmission rate different from the first data transmission rate, wherein the second transmission includes the first transmission block portion.

2. The method of claim 1, further comprising, when the receiver does not successfully decode a combination of the first transmission and the second transmission in a second decoding, transmitting a third transmission to the receiver at the second data transmission rate, wherein the third transmission includes the second transmission block portion.

3. The method of claim 2, further comprising, when the receiver does not successfully decode a combination of the first transmission, the second transmission, and the third transmission in a third decoding, transmitting a fourth transmission to the receiver at a third data transmission rate that is different from both the first data transmission rate and the second data transmission rate, wherein the fourth transmission includes the first transmission block portion.

4. The method of claim 3, further comprising, when the receiver does not successfully decode a combination of the first transmission, the second transmission, the

third transmission, and the fourth transmission in a fourth decoding, transmitting a fifth transmission to the receiver at the third data transmission rate, wherein the fifth transmission includes the second transmission block.

5. The method of claim 4, wherein:

the second data transmission rate is less than the first data transmission rate; and

the third data transmission rate is less than the second data transmission rate.

6. The method of claim 1, wherein:

the transmitter is a base station; and

the receiver is a user terminal.

7. The method of claim 1, wherein:

the transmitter is a user terminal; and

the receiver is a base station.

8. A method of operating a wireless receiver to wirelessly receive a data packet on a variable rate channel from a transmitter, the method comprising:

receiving a first transmission from the transmitter at a first data transmission rate, wherein the first transmission includes a first transmission block portion and a second transmission block portion;

attempting to decode the first transmission in a first decoding; and

when the first decoding is not successful, requesting and receiving a second transmission from the transmitter at a second data transmission rate different from the first data transmission rate, wherein the second transmission includes the first transmission block

portion.

9. The method of claim 8, further comprising:

attempting to decode a combination of the first transmission and the second transmission in a second decoding; and

when the second decoding is not successful, requesting and receiving a third transmission from the transmitter at the second data transmission rate, wherein the third transmission includes the second transmission block portion.

10. The method of claim 9, further comprising:

attempting to decode a combination of the first transmission, the second transmission, and the third transmission in a third decoding; and

when the third decoding is not successful, requesting and receiving a fourth transmission from the receiver at a third data transmission rate that is different from both the first data transmission rate and the second data transmission rate, wherein the fourth transmission includes the first transmission block portion.

11. The method of claim 10, further comprising:

attempting to decode a combination of the first transmission, the second transmission, the third transmission, and the fourth transmission in a fourth decoding; and

when the fourth decoding is not successful, requesting and receiving a fifth transmission from the transmitter at the third data transmission rate, wherein the fifth transmission includes the second transmission block portion.

12. The method of claim 9, wherein:

the second data transmission rate is less than the first data transmission rate; and

the third data transmission rate is less than the second data transmission rate.

13. The method of claim 8, wherein:

the transmitter is a base station; and

the receiver is a user terminal.

14. The method of claim 8, wherein:

the transmitter is a user terminal; and

the receiver is a base station.

~~15.~~ A method of operating a wireless transmitter to wirelessly transmit a data packet to a receiver, the method comprising:

transmitting a first transmission to the receiver that includes data bits and first parity bits; and

when the receiver does not successfully decode the first transmission in a first decoding at a first decoding rate, transmitting a second transmission to the receiver that includes the data bits and second parity bits, wherein the second parity bits are different from the first parity bits.

16. The method of claim 15, further comprising, when the receiver does not successfully decode a combination of the first transmission and the second transmission in a second decoding at a second decoding rate, transmitting a third transmission to the receiver, wherein the third transmission includes the first parity bits.

17. The method of claim 16, further comprising, when the receiver does not successfully decode a combination of the first transmission and the third transmission in a third decoding at the first decoding rate, transmitting a fourth transmission to the receiver, wherein the fourth transmission includes the second parity bits.

18. The method of claim 15, wherein:

the transmitter is a base station; and

the receiver is a user terminal.

19. The method of claim 15, wherein:

the transmitter is a user terminal; and

the receiver is a base station.

~~20.~~ A method of operating a wireless receiver to wirelessly receive a data packet from a transmitter, the method comprising:

receiving a first transmission from the receiver that includes data bits and first parity bits;

attempting to decode the first transmission at a first decoding rate; and

when the first decoding is unsuccessful, requesting and receiving a second transmission from the transmitter that includes the data bits and second parity bits, wherein the second parity bits are different from the first parity bits.

21. The method of claim 20, further comprising:

attempting to decode a combination of the first transmission and the second transmission in a second decoding at a second decoding rate; and

when the second decoding is not successful, requesting and receiving a third transmission from the transmitter, wherein the third transmission includes the first parity bits.

22. The method of claim 21, further comprising:

attempting to decode a combination of the first transmission and the third transmission in a third decoding at the first decoding rate; and

when the third decoding is not successful, requesting and receiving a fourth transmission from the transmitter, wherein the fourth transmission includes the second parity bits.

23. The method of claim 20, wherein:

the transmitter is a base station; and

the receiver is a user terminal.

24. The method of claim 20, wherein:

the transmitter is a user terminal; and

the receiver is a base station.

25. A method of operating a wireless transmitter to wirelessly transmit a data packet on a variable rate channel to a receiver, the method comprising:

transmitting a first transmission to the receiver that includes a set of data bits coded at a first coding rate; and

when the receiver does not successfully decode the first transmission in a first decoding, transmitting a second transmission to the receiver that includes the set of data bits

coded at a second coding rate that is less than the first coding rate.

26. The method of claim 25, further comprising, when the receiver does not successfully decode the second transmission in a second decoding and does not successfully decode a combination of the first transmission and the second transmission in a third decoding, transmitting a third transmission to the receiver that includes the set of data bits coded at a third coding rate that is less than the second coding rate.

27. The method of claim 26, further comprising, when the receiver does not successfully decode the third transmission in a fourth decoding and does not successfully decode a combination of the first transmission, the second transmission, and the third transmission in a fifth decoding, transmitting a fourth transmission to the receiver that includes the set of data bits coded at a fourth coding rate that is less than the third coding rate.

28. The method of claim 25, wherein:

the transmitter is a base station; and

the receiver is a user terminal.

29. The method of claim 25, wherein:

the transmitter is a user terminal; and

the receiver is a base station.

30. A method of operating a wireless receiver to wirelessly receive a data packet on a variable rate channel from a transmitter, the method comprising:

receiving a first transmission from the transmitter, wherein the first transmission includes a set of data bits coded at a first coding rate;

attempting to decode the first transmission in a first decoding;

when the first decoding is not successful, requesting and receiving a second transmission from the receiver that includes the set of data bits coded at a second coding rate that is less than the first coding rate; and

attempting to decode the second transmission in a second decoding.

31. The method of claim 30, further comprising, when the second decoding is not successful:

soft combining the first transmission and the second transmission; and

attempting to decode a combination of the first transmission and the second transmission in a third decoding.

32. The method of claim 31, further comprising, when the third decoding is not successful:

requesting and receiving a third transmission from the receiver that includes the set of data bits coded at a third coding rate that is less than the second coding rate; and

attempting to decode the third transmission in a fourth decoding.

33. The method of claim 32, further comprising, when the fourth decoding is not successful:

soft combining the first transmission, the second transmission, and the third transmission; and

attempting to decode a combination of the first transmission, the second

transmission, and the third transmission in a fifth decoding.

34. The method of claim 30, wherein:

the transmitter is a base station; and

the receiver is a user terminal.

35. The method of claim 30, wherein:

the transmitter is a user terminal; and

the receiver is a base station.

~~36.~~ A base station that acts as a transmitter to wirelessly transmit a data packet on a variable rate channel to a user terminal acting as a receiver, the base station comprising:

an antenna;

a Radio Frequency unit coupled to the antenna; and

at least one digital processor coupled to the Radio Frequency unit that executes software instructions causing the base station to:

transmit a first transmission block portion and a second transmission block portion to the receiver in a first transmission at a first data transmission rate; and

when the receiver does not successfully decode the first transmission in a first decoding, transmit a second transmission to the receiver at a second data transmission rate different from the first data transmission rate, wherein the second transmission includes the first transmission block portion.

~~37~~ A base station that acts as a transmitter to wirelessly transmit a data packet to

a user terminal acting as a receiver, the base station comprising:

an antenna;

a Radio Frequency unit coupled to the antenna; and

at least one digital processor coupled to the Radio Frequency unit that executes software instructions causing the base station to:

transmit a first transmission to the receiver that includes data bits and first parity bits; and

when the receiver does not successfully decode the first transmission in a first decoding at a first decoding rate, transmit a second transmission to the receiver that includes the data bits and second parity bits, wherein the second parity bits are different from the first parity bits.

~~38.~~ A base station that acts as a transmitter to wirelessly transmit a data packet to a user terminal acting as a receiver, the base station comprising:

an antenna;

a Radio Frequency unit coupled to the antenna; and

at least one digital processor coupled to the Radio Frequency unit that executes software instructions causing the base station to:

transmit a first transmission to the receiver that includes a set of data bits coded at a first coding rate; and

when the receiver does not successfully decode the first transmission in a first decoding, transmit a second transmission to the receiver that includes the set of data bits coded at a second coding rate that is less than the first coding rate.

~~39.~~ A user terminal that acts as a wireless receiver to wirelessly receive a data

packet on a variable rate channel from a base station acting as a transmitter, the user terminal comprising:

an antenna;

a Radio Frequency unit coupled to the antenna; and

a digital processor coupled to the Radio Frequency unit that executes software instructions causing the user terminal to:

receive a first transmission from the transmitter at a first data transmission rate, wherein the first transmission includes a first transmission block portion and a second transmission block portion;

attempt to decode the first transmission in a first decoding; and

when the first decoding is not successful, request and receive a second transmission from the transmitter at a second data transmission rate different from the first data transmission rate, wherein the second transmission includes the first transmission block portion.

~~40~~. A user terminal that acts as a wireless receiver to wirelessly receive a data packet from a base station acting as a transmitter, the user terminal comprising:

an antenna;

a Radio Frequency unit coupled to the antenna; and

a digital processor coupled to the Radio Frequency unit that executes software instructions causing the user terminal to:

receive a first transmission from the receiver that includes data bits and first parity bits;

attempt to decode the first transmission at a first decoding rate; and

when the first decoding is unsuccessful, request and receive a second transmission

from the transmitter that includes the data bits and second parity bits, wherein the second parity bits are different from the first parity bits.

41. A user terminal that acts as a wireless receiver to wirelessly receive a data packet from a base station acting as a transmitter, the user terminal comprising:

an antenna;

a Radio Frequency unit coupled to the antenna; and

a digital processor coupled to the Radio Frequency unit that executes software instructions causing the user terminal to:

receive a first transmission from the transmitter, wherein the first transmission includes a set of data bits coded at a first coding rate;

attempt to decode the first transmission in a first decoding;

when the first decoding is not successful, request and receiving a second transmission from the receiver that includes the set of data bits coded at a second coding rate that is less than the first coding rate; and

attempt to decode the second transmission in a second decoding.

42. A plurality of software instructions stored on a media that, upon execution by a base station, cause the base station to act as a transmitter to wirelessly transmit a data packet on a variable rate channel to a user terminal acting as a receiver, the plurality of software instructions comprising:

a set of instructions executed by the base station that cause the base station to transmit a first transmission block portion and a second transmission block portion to the receiver in a first transmission at a first data transmission rate; and

a set of instructions executed by the base station that cause the base station to, when

the receiver does not successfully decode the first transmission in a first decoding, transmit a second transmission to the receiver at a second data transmission rate different from the first data transmission rate, wherein the second transmission includes the first transmission block portion.

43. A plurality of software instructions stored on a media that, upon execution by a base station, cause the base station to act as a transmitter to wirelessly transmit a data packet to a user terminal acting as a receiver, the plurality of software instructions comprising:

a set of instructions executed by the base station that cause the base station to transmit a first transmission to the receiver that includes data bits and first parity bits; and

a set of instructions executed by the base station that cause the base station to, when the receiver does not successfully decode the first transmission in a first decoding at a first decoding rate, transmit a second transmission to the receiver that includes the data bits and second parity bits, wherein the second parity bits are different from the first parity bits.

44. A plurality of software instructions stored on a media that, upon execution by a base station, cause the base station to act as a transmitter to wirelessly transmit a data packet to a user terminal acting as a receiver, the plurality of software instructions comprising:

a set of instructions executed by the base station that cause the base station to transmit a first transmission to the receiver that includes a set of data bits coded at a first coding rate; and

a set of instructions executed by the base station that cause the base station to, when the receiver does not successfully decode the first transmission in a first decoding, transmit

a second transmission to the receiver that includes the set of data bits coded at a second coding rate that is less than the first coding rate.

45. A plurality of software instructions stored on a media that, upon execution by a user terminal, cause the user terminal to act as a receiver to wirelessly receive a data packet from a base station acting as a receiver, the plurality of software instructions comprising:

a set of instructions executed by the user terminal that cause the user terminal to receive a first transmission from the transmitter at a first data transmission rate, wherein the first transmission includes a first transmission block portion and a second transmission block portion;

a set of instructions executed by the user terminal that cause the user terminal to attempt to decode the first transmission in a first decoding; and

a set of instructions executed by the user terminal that cause the user terminal to, when the first decoding is not successful, request and receive a second transmission from the transmitter at a second data transmission rate different from the first data transmission rate, wherein the second transmission includes the first transmission block portion.

46. A plurality of software instructions stored on a media that, upon execution by a user terminal, cause the user terminal to act as a receiver to wirelessly receive a data packet from a base station acting as a receiver, the plurality of software instructions comprising:

a set of instructions executed by the user terminal that cause the user terminal to receive a first transmission from the receiver that includes data bits and first parity bits;

a set of instructions executed by the user terminal that cause the user terminal to

attempt to decode the first transmission at a first decoding rate; and

a set of instructions executed by the user terminal that cause the user terminal to, when the first decoding is unsuccessful, request and receive a second transmission from the transmitter that includes the data bits and second parity bits, wherein the second parity bits are different from the first parity bits.

47. A plurality of software instructions stored on a media that, upon execution by a user terminal, cause the user terminal to act as a receiver to wirelessly receive a data packet from a base station acting as a receiver, the plurality of software instructions comprising:

a set of instructions executed by the user terminal that cause the user terminal to receive a first transmission from the transmitter, wherein the first transmission includes a set of data bits coded at a first coding rate;

a set of instructions executed by the user terminal that cause the user terminal to attempt to decode the first transmission in a first decoding;

a set of instructions executed by the user terminal that cause the user terminal to, when the first decoding is not successful, request and receiving a second transmission from the receiver that includes the set of data bits coded at a second coding rate that is less than the first coding rate; and

a set of instructions executed by the user terminal that cause the user terminal to attempt to decode the second transmission in a second decoding.